PROCEDURE 1340.03
Issued: March 22, 2002
Effective Date: April 16, 2002

SUBJECT: Enterprise Web Application Server

APPLICATION: Executive Branch Departments and Sub-units

PURPOSE: To establish core software to be used to deploy, integrate and manage dynamic
                      e-business applications for the State of Michigan.

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SUMMARY: As e-government continues to grow in speed and complexity, so must the
                      technology foundation that supports it. This foundation must facilitate fast and
                      efficient response. This results in creating a compelling Web experience that
                      improves the quality and quantity of site traffic, increases service volume and
                      frequency, and leverages reusable assets. Dynamic e-government demands a
                      robust, flexible software infrastructure that will allow the State of Michigan to:

                      • Build applications based on open industry standards within a multi-vendor
                        environment
                      • Rapidly develop and deploy applications to meet the State's needs today –
                        and then extend those applications dynamically as needs change
                      • Incorporate mobile devices, new languages and locales, and new partners,
                        with a minimum amount of re-coding or redeployment
                      • Provide high performance, scalability, and security to maximize application
                        integrity

                      WebSphere Application Server (WAS) has been selected as the State standard for
                      an enterprise web application server. WAS offers a J2EE runtime environment
                      and tools for creating, deploying and maintaining Web applications.

APPLICABLE FORMS: None

PROCEDURES:
General Information: Platform application servers are meant to support large, transactional
                      applications. In a Web services scenario, they will be positioned as Web services
                      provider platforms intended to run the business logic of the actual Web services.
                      As such, they display strong transactional support, high availability, workload
                      management, security, high performance, back-end integration, integration
                      brokering and business process management features, event handling and Web
                      services protocols.

Requirements: The web application server will be based on the following requirements:

- Cross platform support including Unix, Windows, and others as applicable
- Plug-and-play applications for use across platforms
- Support for JAVA including Java Servlets, JavaBeans, JSP, EJB Components, Java Database Connectivity (JDBC)
- Integrated support for key Web services open standards, such as Simple Object Access Protocol (SOAP), Universal Description, Discovery, and Integration (UDDI) and Web services description language (WSDL)
- Connectivity options for communication with and managing back-tier systems and servers, including relational, hierarchical and object-oriented databases, transaction processing systems, ERP systems and MQSeries-enabled applications.
- Performance and scaling attributes that support bean-managed and container managed persistence
- Security and access control
- Bi-directional Common Object Request Broker Architecture (CORBA) connectivity
- ActiveX client and server integration through an ActiveX bridge
- Integration between messaging and component-based paradigms through Java Message Service (JMS) listener and message beans
- Transparent access to shared information across a distributed computing environment with shared work areas
- Support for business rule beans which allows for dynamic updates to the application logic to quickly meet evolving business requirements
- Consistent, centralized enforcement of enterprise security and management policies
- Open, standards based architecture allowing multiple levels of integration to existing and new systems and solutions
- Reduced skill requirements by shielding administrators from platform specific complexities
- Secure, role based delegation of tasks without the need to give out "super user" authority
- Cross platform independence of integrated solutions
- Auditable security policy and tracking of administrator and end user activity
- Enabling technologies for best practices process automation
- Rapid deployment of the technology and the applications being managed or protected
- Separation of user management from policy management and the delegated administration of each
- Secure communications between solution components and where appropriate for user and administrator activities
- Scalability from a physical workload and performance perspective and an administrator perspective

Exclusions:	This standard is limited to the foundation product, WebSphere Application Server. It does not include the extension products for application development, presentation and dynamic access, dynamic integration, or deployment and RAS/performance. Application accelerators are also excluded as they will be addressed in separate standards as needed (e.g., WebSphere Commerce Suite).
Exceptions:	Based on a study by e-Michigan, Microsoft is the standard web technology platform in use and the IIS Server is the most widely used (88%) across the State executive branch agencies. As such, it is integral to recognize the need for continuing support of the Microsoft platform for web applications.

The use of Microsoft IIS Server for web applications will be acceptable under the following circumstances:

- Applications that are developed for usage only within an agency.
- Applications that are excluded from migration into the e-Michigan portal architecture.

Maintenance:	
DMB:	Acquisition Services shall not approve any acquisition or purchase request without confirmation from the Department of Information Technology, Office of Research and Policy that such request is in compliance with the standard.
Operating Unit (OU):	Any and all projects, consulting requests, equipment and software acquisition requests, or ITB's relating to Web Application Servers must have given consideration to the functional requirements of this standard and will be subject to review for compliance with this standard.
DIT:	The Enterprise Standards Review Team (ESRT) will review this standard on a continuing basis and make recommendations to the State Chief Information Officer. An appropriate group of staff, representing a wide-range of State Operating Units, will review and possibly revise these standards and guidelines as often as needed.

Exceptions from this standard for reasons other than those outlined above will be made through the exception handling process described in the Exception Process Template.

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